

On the resonance excitation of waves ...

S/057/63/033/001/C13/017
B125/B186

Fig. 1 shows the disturbance in the t, x plane. The full lines denote the shock waves. For $\mu < 0$ the flow through the centered rarefied expansion waves is more complex. The irreversible change of the inner energy at the front of the magnetoacoustic wave in a strong magnetic field yields

$$T\delta S = \frac{H_0}{3\pi^2\rho_0(1+\mu)} \sqrt{\frac{2\epsilon}{3\pi\mu(1+\mu)H_0}}$$

For $\mu = -1$ the next higher approximation is to be considered. For Δk there is no irreversible heating through shock waves. The irreversible heating of the liquid in the shock waves does not depend on the dissipative coefficients. The frequency of maximum dissipation is slightly displaced with respect to the resonance frequency. According to these results a plasma is most conveniently heated by magnetoacoustic waves. There are 3 figures.

ASSOCIATION: Matematicheskii institut im. V. A. Steklova AN SSSR, Moskva
(Mathematical Institute imeni V. A. Steklov AS USSR, Moscow)

SUBMITTED: October 28, 1961

Card 3/4

IORDANSKIY, S.V.; KULIKOVSKIY, A.G.

Stability of higher correlation functions in a plasma. Dokl.
AN SSSR 152 no.4:849-852 0 '63. (MIRA 16:11)

1. Matematicheskiy institut im. V.A. Steklova AN SSSR. Predstavleno
akademikom L.I. Sedovym.

IORDANSKIY, S.V.

Hydrodynamics of a rotating Bose system below the condensation point. Dokl. AN SSSR 153 no.1:74-77 N '63.
(MIRA 17:1)

1. Matematicheskiy institut im. V.A. Steklova AN SSSR.
Predstavleno akademikom N.N. Bogolyubovym.

ACCESSION NR: AP4019243

S/0056/64/046/002/0732/0744

AUTHORS: Iordanskiy, S. V.; Kulikovskiy, A. G.

TITLE: A quasilinear approximation and the correlation functions for a plasma

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 732-744

TOPIC TAGS: plasma, correlation function, Langmuir plasma wave, plasma instability, higher correlation function, first distribution function, nonlinear interaction, quasilinear approximation

ABSTRACT: A completely ionized spatially-homogeneous plasma without a magnetic field is considered, when the usual expressions for the correlation functions in the plasma are unstable against the occurrence of Langmuir plasma waves. The purpose is to obtain expressions for the second correlation function, since it determines the variation of the first distribution functions. A new method is

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ACCESSION NR: AP4019243

therefore used to solve the equations for the higher correlation functions, based on a simple representation of the corresponding Green's functions. Approximate expressions for the correlation functions, with allowance for nonlinear interactions, are obtained for small instability increments. It is shown that the quasilinear approximation is odd only in the case when the instability is contained in a sufficiently small region of phase velocities of the waves. The necessary condition for the applicability of the equations of the quasilinear approximation for large time intervals is shown to be smallness of the increments and also smallness of the relative velocity increment. "The authors are grateful to N. N. Bogolyubov and Yu. L. Klimontovich for a discussion of questions connected with this work." Orig. art. has: 34 formulas.

ASSOCIATION: Matematicheskii institut im. V. A. Steklova AN SSSR
(Mathematics Institute, AN SSSR)

Card 2/1
2

IORDANSKIY, S.V.; KULIKOVSKIY, A.G.

Quasi-linear approximation and the correlation functions in a plasma.
Zhur. eksp. i teor. fiz. 46 no.2:732-744 F '64.

(MIRA 17:9)

1. Matematicheskii institut AN SSSR.

ACCESSION NR: AP4042385

S/0056/64/047/001/0167/0174

AUTHOR: Iordanskiy, S. V.

TITLE: Energy spectrum of a Bose gas with weak attraction at large distances

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964; 167-174

TOPIC TAGS: Bose Einstein gas, energy level, scattering amplitude, spectral energy distribution, boson

ABSTRACT: In view of the complexity and excessive degree of approximation of earlier methods, the author uses a diagram technique, developed by S. T. Belyayev (ZhETF v. 34, 417 and 433, 1958), to calculate the ground-state energy and the spectrum of elementary excitations for a Bose gas with negative scattering amplitude at low momenta. It is assumed that the potential energy $V = V_1 + V_2$, of the pair interaction of the Bose particles consists of a repelling

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ACCESSION NR: AP4042385

short-range nucleus (radius a) and an attracting long-range term (radius $R \gg a$), the relation between the effective radii of the two potentials being such that in the essential region we have $V_1 a^3 \sim V_2 R^3$. It is shown that in this case the scattering amplitude of two particles interacting via the potential V can be expressed simply in terms of the scattering amplitude of two particles with potential interaction energy V_1 . The scattering amplitude can be represented by a Born series, obtained by solving an integral equation for the scattering amplitude. In solving this problem, an important role is played by repulsion of small distances, which ensures the possibility of stable states at densities above a certain critical value. The scattering amplitude with zero momenta is assumed small, so that the gas approximation becomes valid near the critical density. The final formulas are similar to those obtained by K. Huang (Phys. Rev. 119, 1129, 1960), but the numerical coeffi-

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ACCESSION NR: AP4042385

clients differ noticeably. The presence of even weak attraction is shown to lead to a "coalescence" of the Bose particles, so that there are no stable homogeneous states at densities below critical. "The author is grateful to N. N. Bogolyubov and S. V. Tyablikov for a discussion and interest in the work." Orig. art. has: 22 formulas.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova Akademii nauk SSSR (Mathematics Institute, Academy of Sciences SSSR)

SUBMITTED: 18Dec63

ENCL: 00

SUB CODE: NP

NR REF SOV: 004

OTHER: 002

3/3

IORDANSKIY, S.V.

Energy spectrum of a Bose gas with weak attraction at large distances. Zhur. eksp. i teor. fiz. 47 no.1:167-174 J1 '64.
(MIRA 17:9)

1. Matematicheskiy institut imeni Steklova AN SSSR.

IORDANSKIY, S. V.; KULIKOVSKIY, A. G.

General condition for the stability of higher correlation
functions in a plasma. Dokl. AN SSSR 156 no. 1:35-37 My '64.
(MIRA 17:5)

1. Predstavleno akademikom L. I. Sedovym.

EWI(1)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/ENA(m)-2 Ps-6/Pe-4/Pab-10/P1-4

[illegible]

.. .. . 7 -

[illegible]

315

АН ССРС. Доклады*, V. 6, 6, No. 1, 1964.

plasma, electromagnetic wave interaction, statistics, correlation function

4. Let us consider the equations describing the behavior of correlation functions $\langle \sigma_i \sigma_j \rangle$ and $\langle \sigma_i \sigma_j \sigma_k \rangle$ [10]:

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$$\frac{18.4}{2}$$

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$$V = \frac{1}{2} \sum_{i=1}^n \dot{x}_i^2$$

$$L = \frac{1}{2} \sum_{i=1}^n \dot{x}_i^2 - V$$

$$M_{ij} = - \sum_{k=1}^n \frac{\partial^2 V}{\partial x_i \partial x_j} \dot{x}_k^2$$

$$H = \sum_{i=1}^n \frac{\partial^2 V}{\partial x_i^2} \dot{x}_i^2$$

$$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}_i} \right) = \frac{\partial L}{\partial x_i}$$

$$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}_i} \right) = \frac{\partial L}{\partial x_i}$$

$$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}_i} \right) = \frac{\partial L}{\partial x_i}$$

Card 2/8

$$\delta N_{a_m} = N_{a_1} \dots N_{a_m} - \sum_i N_{a_1} N_{a_2} \dots N_{a_{i-1}} N_{a_{i+1}} \dots N_{a_m} + \dots, \quad (4)$$

where the dots stand for terms involving more than two factors.
We shall consider all the arguments x_i ($i=1, \dots, s$) to be different.
The terms of equation (4) are then all different.
the terms involving δ -functions arising from the coincidence of
 x_{i_1} with the other arguments, and we have:

$$F_{a_1, \dots, a_m} = F_{a_1, \dots, a_m} + \sum_{i=1}^m \lambda_{a_1, \dots, a_m} F_{a_1, \dots, a_m}$$

We express the distribution functions F_{a_1, \dots, a_m} in terms of irre-
reduction functions, by the relations

$$F_{a_1, \dots, a_m} = g_{a_1, \dots, a_m} + \sum_{(a_1, \dots, a_m)} g_{a_1, \dots, a_m} + \dots \quad (5)$$

Card 3/8

$$\begin{aligned}
 & \frac{d}{dt} \delta a_1 \dots a_i + \sum_l c_l \frac{\partial}{\partial r_l} \delta a_1 \dots a_i + \sum_l \frac{e_l}{m_{a_l}} \left(E + \frac{c}{c} \times H \right) \frac{\partial}{\partial v_l} \delta a_1 \dots a_i = \\
 & - \sum_{l, l' \neq i} \frac{e_{a_l}}{m_{a_l}} \left[\frac{\partial}{\partial r_l} \frac{e_{a_{l'}}}{|r_l - r_{l'}|} \left(1 - \frac{v_l v_{l'}}{c^2} \right) + \frac{v_l}{c} \left(\frac{v_{l'}}{c} \frac{\partial}{\partial r_{l'}} \frac{e_{a_l}}{|r_l - r_{l'}|} \right) \right] \times \\
 & \frac{1}{v_l} \left(\delta a_1 \dots a_i + \sum_{(a_1 \dots a_i)} \delta a_l \dots \delta a_{i-1} \right) - \sum_l \frac{e_{a_l}}{m_{a_l}} \sum_{a_{i+1}} \left[\frac{\partial}{\partial r_l} \frac{e_{a_{i+1}}}{|r_l - r_{i+1}|} \left(1 - \frac{v_l v_{i+1}}{c^2} \right) \right. \\
 & \left. + \frac{v_{i+1}}{c} \left(\frac{\partial}{\partial r_l} \frac{e_{a_{i+1}}}{|r_l - r_{i+1}|} \right) \right] \times \frac{\partial}{\partial v_l} (\delta a_1 \dots a_{i+1}) + \\
 & + \sum_{(a_1 \dots a_{i+1})} \delta a_l \dots \delta a_{i+1} - F_{a_{i+1}} \delta a_1 \dots a_i \Big) d^3 r_{i+1} = 0. \quad (7)
 \end{aligned}$$

$\sum_{(a_1 \dots a_i)} \delta a_1 \dots \delta a_i$ denotes the sum of products of pairs of wavefunctions corresponding to arbitrary partitions of the indices $a_1 \dots a_i$ into two classes such that $a_1 \dots a_i$ is in one class and a_{i+1} is in the other class.

The same class $(\sum_{(a_1 \dots a_i)} \delta a_1 \dots \delta a_i)$ has an analogous meaning. If the mean field and δH are disregarded, system (7) coincides with system (1) of reference [2]. In the fourth term of equation (7), the term involving δa_{i+1} is of the order of the parameter δa_{i+1} with respect to the last term. Assuming δa_{i+1} is small neglect

APR 30 1963

1. Then the homogeneous system of equations is solved for

the homogeneous system

4. stands for the transition matrix from the initial

to the final state

the transition matrix from the initial

The additions to the electromagnetic field are computed by
the BILT-SAVART equations. From
the initial conditions
the Green's functions are computed. The
of solutions of system (1) (growth or damping) is

NR: AF4035803

by the properties of solutions of system (7). Let G_{α} be a solution of system (7). Let us suppose that $G_{\alpha}, \dots, G_{\alpha+n}$ as in the stationary case. Let us study the behavior in time of the deviation from this solution of $\delta_{\alpha}, \dots, \delta_{\alpha+n} = G_{\alpha}, \dots, G_{\alpha+n} - G_{\alpha}, \dots, G_{\alpha+n}$ assuming this deviation is small. If the initial conditions for linearization of system (7) (with respect to f) are such that at the initial moment only the δ th correlation is different from zero, we can show, (similarly to the case of the δ th correlation) that the deviation from the stationary solution is of order μ . As any initial conditions may be represented as superpositions of initial conditions considered above, with different s , the stability of the stationary solution is determined by the stability of the stationary solution for each s .

It should remain to be shown that the stationary solution is stable for each s . Taking into account the fact that the stationary solution is stable for each s , we can conclude that the stationary solution is stable for each s . In the last term, we have a deviation in the form

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02249-05

NR: AP4035803

$$\frac{\epsilon_3}{m_{a1}} \frac{\partial F_1}{\partial v_1} \delta E = \dots$$

the electromagnetic field δE , δH will be computed by exact formulas through δa . Orig. art. has: 9 equations.

IORDANSKIY, S.V.

Symposium on the problem of many bodies. Vest. AN SSSR 34
no.12:65 D '64 (MIRA 18 :1)

ENT(1)/EPF(D)-2/ENG(V)/EPR Pe-5/Pe-4/12-4 WJ/GG
 AP 5006522 S,0056,65/048/002/0708/0714

AUTHOR: Iordanskiy, S. V.

TITLE: Vortex ring formation in a superfluid liquid

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 2, 1965, 708-714

TOPIC TAGS: vortex ring, superfluid, thermal fluctuation vortex ring

ABSTRACT: The formation of vortex rings in a superfluid liquid with relative motion of the normal and superfluid components is considered. The Fokker-Planck equation for ring formation due to thermal fluctuations is derived and a formula is given for the rate of vortex ring formation.

$$J_0 = \frac{2\pi kT \sqrt{kT} V}{\rho_n \lambda^2 \gamma \pi m} \exp \left(-\frac{F(R_0)}{kT} \right) \exp \left(-\frac{F(R_0)}{kT} \right)$$

$$\times \frac{\rho_n b}{\rho_n b^3 + (1 - b' \rho_n / \rho) \rho^3} \exp \left(-\frac{F(R_0)}{kT} \right)$$

Card 1/3

L 43762-65

ACCESSION NR: AP5006522

Taking

$$E'(n_x, \phi, R) = \sum_x \hbar \omega(x, R) n_x + p(R) v_s (1 - \cos \phi),$$

$$S_L = 2R \frac{\sqrt{2mkT}}{\hbar} \left(\ln \frac{1.046\hbar}{a\sqrt{2mkT}} \right)^{-1/2} \Gamma\left(\frac{3}{2}\right) \zeta\left(\frac{3}{2}\right).$$

$$\text{or } R_{sp} = \frac{\hbar}{2mv_s} \left[\ln \frac{8R_{sp}}{a} - \frac{2}{4} \right] - \frac{kT}{\hbar} \frac{\sqrt{2mkT}}{a\sqrt{2mkT}} \left(\ln \frac{1.046\hbar}{a\sqrt{2mkT}} \right)^{-1/2} \frac{4.4m}{4\pi^2 p_s v_s \hbar}.$$

into account, this formula permits the calculation of the number of vortex rings of supercritical radius formed per unit time in volume V . The inverse value determines the relaxation time to the equilibrium state with $v_s = v_n$. A pronounced rate of vortex formation in HeII is found for $v_s > 60$ cm/sec, dropping sharply to unobservable values of the order of e^{-1000} for speeds near 40 cm/sec. The magnitude of j_R varies extremely fast with temperature, due to variation in ρ_g at $T > 1.4^\circ\text{K}$. "The author expresses gratitude to N. N. Bogolyubov for discussion of and interest in the work, and also to L. P. Pitayevskiy, for valuable discussions." Orig. art. has: 34

Card 2/3

1-1-65

AC 250101 NR: A25006522

formulas.

ORIGINATOR: Matematicheskii Institut imeni V. A. Steklova, Akademii nauk SSSR
(Mathematical Institute, Academy of Sciences SSSR)

25Aug64

ENCL: 00

SUB CODE: 103

003

OTHER: 004

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Card 3/3

I 2195-66 EWT(1)/EWT(m)/EWP(w)/T/EWP(t)/EWP(b) JD
 ACCESSION NR: AP5019236 UR/0056/65/049/001/0225/0236

AUTHOR: Iordanskiy, S. V. 44,55

TITLE: Mutual friction force in a rotating Bose gas 21,44,55 57B

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, 225-236

TOPIC TAGS: phonon, friction, excitation spectrum, vortex, phonon scattering

ABSTRACT: The author obtains for the mutual friction associated with the scattering of excitations by vortex filaments a general expression which is more accurate than that derived in earlier work (DAN SSSR v. 153, 74, 1963; *Akh. Phys.* v. 29, 335, 1964). He also investigates the scattering of long-wavelength excitations (phonons) by a vortex filament within the framework of the model of a weakly nonideal Bose gas. It is shown that the phonon part of the mutual friction force contains a large transverse component, and that when the additional transverse terms are taken into account the agreement with experiment is improved for the roton part of the mutual-friction force. "The author thanks N. N. Bogolyubov for a discussion and interest in the work, and L. P. Pitayevskiy for useful discussions." Orig. art. has: 1 figure and 41 formulas. 44,55

Card 1/2

L 2195-66

ACCESSION NR: AP5019236

ASSOCIATION: None

SUBMITTED: 14Jan65

ENCL: 00

SUB CODE: GP

NO REF SOV: 008

OTHER: 004

Card 2/2 *DP*

L 12792-66 EWT(1)/EWP(m)/EWA(d)/T-2/EWA(m)-2/ETC(m)/EWA(1) IJP(c) WW

ACC NR: AP5026626

SOURCE CODE: UR/0056/65/049/004/1326/1331

AUTHORS: ^{44,55} Iordanskiy, S. V.; ^{44,55} Kulikovskiy, A. G. ⁷⁴
⁷¹ B

ORG: ^{44,55} Mathematics Institute, Academy of Sciences SSSR (Matematicheskii institut Akademii nauk SSSR)

TITLE: On the absolute stability of some plane parallel flows at high Reynolds numbers

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 4, 1965, 1326-1331

TOPIC TAGS: Reynolds number, motion stability, boundary layer stability, viscous flow, viscous fluid, magnetohydrodynamics

ABSTRACT: ^{1, 44,55} Localized disturbances in the plane parallel flow of a viscous fluid are considered and the character of their instability is investigated. The localized disturbance is represented by a Fourier integral with respect to the wave number k and the behavior of the individual terms of the series is analyzed. It is shown that the localized disturbances attenuate in the course of time in any finite arbitrary region of the flow in question. The Reynolds numbers are assumed to be high enough so that k can be regarded as small for velocity profiles without

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L 12792-66

ACC NR: AP5026626

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inflection points. Inflection points, if they occur, are assumed to be close to the wall, so that the instability interval lies entirely in the region of small k . Under these conditions all plane parallel flows having sufficiently small values of k on the neutral curve are absolutely stable. If the Reynolds numbers are such that k on the neutral curve becomes of the order of unity, no analytic proof of either absolute stability or absolute instability can be obtained. The result can be used in magnetohydrodynamics for plane parallel flow in a transverse magnetic field. Orig. art. has: 15 formulas.

SUB CODE: 20/ SUBM DATE: 21May65/ NR REF SOV: 003/ OTH REF: 008

HW
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27044

Rasskaz o novoy pol'she. (i-ya pol'sk. promyystavka v Moskve).
Novoe vremya, 1949. No. 36. S. 28-30.

Laureaty Stalinskikh Premiy-novatory Nauki i Tekhniki. -Sm. 27405

SO: LETOPIS' NO. 34

IORDANSKIY, V. N. Cand. Tech. Sci.

Dissertation: "Studying the Process of Centrifugal Casting of Thick-Walled Blanks."
Moscow Order of the Labor Red Banner Higher Technical School imeni N.E.Bauman, 14 Apr 47.

SO: Vechernyaya Moskva, Apr, 1947 (Project #17836)

10RDANSKIY, V.N.

18.7200

18.1210

66956

SOV/137-59-9-19733

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 9, p 106 (USSR)

AUTHOR: Iordanskiy, V.N.

TITLE: Weldable ¹⁸Aluminum-Magnesium Alloys

PERIODICAL: V sb.: Sovrem. splavy i ikh term. obrabotka, Moscow, Mashgiz, 1958, pp 308 - 313

ABSTRACT: The author describes basic physical, mechanical and technological properties of AMg3, AMg5V¹⁸ and AMg6T¹⁸ alloys. The modules of elasticity of I and II kind are - $E 7.0 \cdot 10^3 \text{ kg/mm}^2$ and $C 2.7 \times 10^3 \text{ kg/mm}^2$; $\gamma = 2.65 \text{ g/cm}^3$; heat resistance of the alloys is not high (up to 150°C), but their behavior is satisfactory at lower temperatures (up to -196°C). Vibration resistance is high; at $5 \cdot 10^8$ cycles $\sigma_{\omega} = 12.5 \text{ kg/mm}^2$; σ_b (kg/mm^2) σ_s (kg/mm^2) and δ (%) are correspondingly: 1) at 20°C : $\text{AMg5V} \geq 28$; ≥ 15 ; ≥ 15 ; $\text{AMg6T} \geq 32$; ≥ 16 ; ≥ 15 ; 2) at -193°C : $\text{AMg3} - 33.0, 10.1, 43.0$; $\text{AMg5V} - 42.0, 16.9, 41.6$; $\text{AMg6T} - 44.7, 20.7, 34.3$. Cold deformation up to 40% of AMg alloys raises σ_b by 13% and σ_s by 23 - 30%, but δ is reduced by 50 - 75%. Weldability of AMg3 and AMg6T alloys is good, that of AMg5V is satisfactory. Best results

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Weldable Aluminum-Magnesium Alloys

66956

SOV/137-59-9-19733

were obtained with Ar-arc welding. The strength coefficient of butt joints is 0.9 - 1.0, that of overlap joints is 0.65. Ductility of the weld-on metal is 12 - 15%, so that the work after welding can be subjected to burnishing and slight drawing. The alloys are well deformable in hot state. The forging temperature is for AMg3 - 480 to 450°C; AMg5V - 500 to 480°C; AMg6T - 480 to 460°C. The alloys have increased proneness to scale formation, which can be eliminated by heating the metal up to 280 - 300°C. The recrystallization temperature of the alloys is 280 - 250°C. AMg alloys and their weld joints are highly corrosion resistant and preserve their mechanical properties after extended tests in aggressive media.

N.G.

Card 2/2

SPIRIDONOV, V.B.; SKAKOV, Yu.A.; IORDANSKIY, V.N.

Use of the method of thin metallic foils for studying the morphology
of martensite. Zav.lab. 29 no.8:955-956 '63. (MIRA 16:9)
(Martensite—Metallography) (Metal foils)

IORDANSKIY, V. N.; SKAKOV, Yu. A.; SPIRIDONOV, V. B.

"Structural changes during aging of martensite in chromium-nickel steel."

report submitted for 3rd European Regional Conf, Electron Microscopy, Prague,
26 Aug-3 Sep 64.

L 22544-65 EWT(m)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b) Pf-l MJW/JD/HW

ACCESSION NR: AP5002352

S/0126/64/018/006/0929/0930

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Morphology of martensite in Kh17N4M2D steel

SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 6, 1964, 929-930

TOPIC TAGS: Kh17N4M2D steel, martensite formation, steel deformation, martensite morphology

ABSTRACT: The morphology of martensite obtained by 10-15% deformation of steel at room temperature was investigated. The martensite consisted of 1-2 micron long needles with no internal twinning; the density of dislocations was above 10^{11} cm^{-2} . The hexagonal ϵ -phase was not present. The strength of the martensite formed by deformation was similar to that of martensite obtained by cooling after tempering. Martensite by the latter method could not be really compared with martensite obtained at low temperatures due to the differences in carbon content. But comparison of the martensites formed by cold working and by deform-

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L 22544-65
ACCESSION NR: AP5002352

ation led to the conclusion that the morphology of martensite is determined primarily by the temperature of its formation. Orig. art. has: 1 figure and 1 table

ASSOCIATION: None

SUBMITTED: 10Dec63

ENCL: 00

SUB CODE: MM

NR REF SOV: 002

OTHER: 002

Card 2/2

L 17074-65 EWT(m)/EWA(d)/EWP(t)/EWP(b) ASD(m)-3/AFETR MJW/JD/JW

ACCESSION NR: AP4049919

S/0020/64/159/003/0544/0547

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Changes in the structure and properties with aging of martensite in chromium nickel steels

SOURCE: AN SSSR. Doklady*, v. 159, no. 3, 1964, 544-547

TOPIC TAGS: chromium nickel steel, maraging steel, martensite, subzero treatment, straining, heat treatment, aging, property, structure

ABSTRACT: The kinetics of aging and the effect of aging on the fine structure of martensite have been investigated in three precipitation-hardenable steels: Kh15N9Yo (15.03% Cr, 8.53% Ni, 1.40% Al); Kh16N5M3 (16.20% Cr, 4.78% Ni; 3.30% Mo); and Kh17N4M2D (16.65% Cr, 4.29% Ni; 2.25% Mo, 1.35% Cu). The martensite was formed by the subzero treatment (at -70C for 2 hr), by cold working, or by annealing at 750C for 1.5 hr followed by cooling. The aging-induced change in the properties of steels of this type occurred rapidly in the initial stage and at a rate about two orders slower in the second stage. In a steel alloyed with Mo, the difference in the rate of change was still higher. The activation energy of aging, which ranged from 40 to 57 kcal/g-at, depending on the steel composition and preliminary

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L 17074-65

ACCESSION NR: AP4049919

treatment, remained constant during the entire aging process. This showed that aging is controlled by diffusion in both stages: by a "drift" of the solute atoms toward dislocations during the first stage; and by the diffusion resulting from chemical gradients in the second stage. The kinetics of aging and structural changes occurring in martensite during aging are very similar in steels alloyed with different elements. The differences in the nature of alloying elements promoting the aging and in the final structure of precipitated secondary phase appear during later stages of aging. The main changes in the martensite properties appear to occur in the initial stage of aging and to be associated with the formation of segregations and coherent formations. Hence, aging of martensite is a particular case of aging when the matrix has a very high dislocation density, and strengthening takes place during the decomposition stage which precedes the formation of particles of the stable phase and which is different in different steels. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 10Jul64

ENCL: 00

SUB CODE: MM, IE

NO REF SOV: 008

OTHER: 004

ATD PRESS: 3149

Card 2/2

AP4047511 EWT(m)/ELA(d)/T/EWP(t)/EWP(b) ASD(m)-3 MJW/JD

ACCESSION NR: AP4047511

S/0129/64/000/010/0049/0051

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Microstructure of martensite in chromium-nickel steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 10, 1964, 49-51

TOPIC TAGS: chromium nickel steel, Kh17N4M2D steel, austenitic martensitic steel, precipitation hardenable steel, steel martensite, martensite structure, martensite strength

ABSTRACT: The structure of martensite in Kh17N4M2D precipitation-hardenable steel (0.09%C, 16.65% Cr, 4.29% Ni, 2.25% Mo, 1.34% Cu) has been studied with a transmission electron microscope. It was found that the structure of martensite depends upon the conditions of formation. Subzero treatment at -70C for 2 hr transformed 80—85% of the austenite into martensite consisting of a mixture of needles and lamellae with twin crystals 100—2000 Å wide. In wider twins, some dislocations were observed. Needles contained no twins, but a considerable number of dislocations. High tempering at 750C for 1.5 hr and

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L 19478-65
ACCESSION NR: AP4047511

Subsequent cooling to room temperature transformed practically all the austenite into acicular martensite without twins but with a significant number of dislocations. The tensile and yield strengths of martensite obtained by subzero treatment were 140—150 kg/mm² and 100 kg/mm². Those of martensite obtained by tempering were lower: 105—110 kg/mm² and 80 kg/mm². Individual crystals of martensite observed in residual austenite containing stacking faults confirmed the assumption about the nucleation action of stacking faults which otherwise appear to limit the growth of martensite crystals. Orig. art. has: 3 figures.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 003

ATD PRESS: 3159

Card 2/2

L 15025-65 EWT(m)/EWA(d)/EWP(t)/WYP(b) : ASD(m)-3/AFETR JD
 ACCESSION NR: AP4049106 S/0129/64/000/011/0019/0024

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Changes with aging in the properties of martensite of chromium-nickel steels

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 11, 1964, 19-24

TOPIC TAGS: chromium nickel steel, cold treatment, straining, heat treatment, martensite, aging

ABSTRACT: The dependence of the aging effect on the structure of martensite, i.e., on the method of obtaining martensite, in stainless, austenitic-ferritic, Cr-Ni steels has been investigated. In four semiaustenitic stainless steels containing 0.07—0.09% C, 15.03—16.65% Cr, and 4.29—9.53% Ni alloyed with Al, Mo, Mo and Cu, or Mo and Al, martensite was formed by subzero treatment at -70C for 2 hr, by cold rolling with a 15—17% reduction, or by cooling after tempering for 1.5 hr at 750C. Changes in the mechanical properties and electrical resistivity were studied in the steels aged for up to 3 hr at temperatures ranging from 400 to 550C. Rapid and slow stages in the changes caused by aging in the properties of Cr-Ni steels with a martensitic structure were observed. The two stages were particularly noticeable in steels alloyed with Cu or Al. In steels alloyed with Mo, the main change in

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L 15025-65

ACCESSION NR: AP4049106

properties occurred in the first minutes of aging. In both stages, aging is determined by diffusion. In the first stage of aging, the diffusion consists mainly in a "drift" of dissolved atoms toward dislocations under the action of the stress field, while in the second stage, a normal diffusion caused by chemical gradients takes place. The strengthening with aging probably occurs in the initial stage of martensite decomposition when the dislocations are pinned. The nature and concentration of the structure defects affect the kinetics of strengthening and weakening with aging. The structure defects of martensite formed by cold treatment are more stable than the defects of martensite formed by straining or heat treatment. As a result, cold-treated steels get higher mechanical properties with aging, and are less susceptible to weakening with overaging than the steels with a martensitic structure formed by straining or heat treatment. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REP SOV: 007

OTHER: 001

ATD PRESS: 3143

Card 2/2

FWT(m)/EWP(w)/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) Pf-4/Ps-4

AP5007008

S/0129/55/000/003/0047/0049

iridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Electron microscopic study of Kh21N5T steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 3, 1965, 47-49

TOPIC TAGS: brittleness, steel hardening, metal mechanical property, heat treatment, metal foil

ABSTRACT: The authors report the results of an electron microscopic study of Kh21N5T steel foil subjected to heat treatment used for massive samples. Mechanical tests of laboratory samples in the hardened state (quenched from 1050°C, 30-min aging, cooling in water) and after additional heating indicate that the steel has a tendency toward embrittlement in the presence of titanium (in excess of amounts necessary for fixing carbon) and aluminum. The embrittlement after tempering at about 500°C is due to separation processes. The tendency toward separation at dislocation-type defects is particularly noticeable at higher aging temperatures (600°C for 8 hr, cooling in air). Diffraction patterns of the same character were

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L 65380-65

ACCESSION NR: AP5007008

obtained at 550 and 600°C; this shows that heating to 600-650°C causes solidification of the segregations and an accompanying increase in impact strength. To prevent the embrittlement of Kh21N5T steel, it is necessary to restrict the content of carbon, titanium, and possibly silicon. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

W. 155 30V 001

OTHER: 000

Card 2/2

L 04199-57 EWT(m)/ENP(w)/T/ENP(t)/ETI IJP(c) JD/WW/JG/NB

ACC NR: AP6028582

SOURCE CODE: UR/0129/66/000/008/0006/0011

AUTHOR: Spiridonov, V. B.; Vlasova, T. A.; Iordanskiy, V. N.

ORG: none

TITLE: An electron-microscopic study of the Al-Zn-Mg alloy system. [Delivered at the Seminar on Advanced Technology for Heat Treatment of Light Alloys, Leningrad, December 1963]

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 8, 1966, 6-11

TOPIC TAGS: aluminum alloy, zinc, magnesium, heat treatment, precipitation hardening, electron microscopy, phase structure, crystal lattice parameter, mechanical property, stress corrosion, grain boundary stability

ABSTRACT: An electron-microscopic study was made of the Al-Zn-Mg alloy system. Fifteen alloys were used having the following composition ranges: 3.25-4.90% Zn, 1.30-4.32% Mg, trace--0.65% Mn, trace--0.22% Fe, trace--0.10% Si, trace--0.12% Cr, trace--0.22% Zr, trace--0.05% Cu, and trace--0.17% Ag. Foils of 0.10-0.15 mm thickness were quenched in air or water from 450°C and aged at 20-275°C. The aging mechanism of the alloys were related to stress corrosion behavior. Electron micrographs of ATaM and V92 alloys showed G-P zones 30-50 Å in diameter after room temperature aging. Aging at 100°C for 100 hr (maximum strength condition) resulted in MgZn₂ formation on

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UDC: 669.15'72:620.187

L 04199-67

ACC NR: AP6028582

{111} matrix planes. Strain fields due to coherency were observed around the $MgZn_2$ particles after aging at 130-140°C, while higher aging temperatures merely changed the dimensions of the $MgZn_2$ particles. At 200-250°C, $Al_2Mg_3Zn_3$ (T-phase) precipitated. Lattice parameters and plane spacings for the precipitates and mechanical properties for different aging conditions are presented. The relation between grain boundary precipitation and stress corrosion was established for these alloys. After quenching from 450°C and aging to different conditions, the relative amount of both grain boundary and adjacent boundary zone precipitation was obtained. Zones adjacent to grain boundaries were relatively free of precipitation and widened as a function of aging temperature, corresponding to an increase in grain boundary precipitation. Particle dimensions were 1500-2500 Å on grain boundaries, 1000-2000 Å on adjacent zones, and 250-400 Å within grains. Manganese and chromium did not affect the size or distribution of precipitates, although they improved the stress corrosion properties. The addition of 0.16-0.22% Zr resulted in a more uniform distribution and finer size of precipitate; the particle size did not exceed 250 Å. Titanium and scandium had the same effect as zirconium. The greatest structural changes were caused by copper and silver additions; particle size did not exceed 150 Å and the precipitate-free zone diminished to a width of 400-500 Å. Explanations based on increased vacancy concentrations as a result of alloying are presented. Two methods are recommended for decreasing the stress corrosion tendencies of these alloys: 1) decreasing the vacancy concentration before aging by lowering the cooling rate during quenching; or raising the

Doc 7/3

L 04199-67

ACC NR: AP6028502

aging temperature but necessarily adding Cr, Mn, Fe, Si, Ti, or Zr; 2) raising the vacancy concentration for a more disperse and uniform structure by adding Zr, Ti, Sc, Cu, or Ag to increase the vacancy solubility. Orig. art. has: 5 figures, 5 tables. 4

SUB CODE: 11,20/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 006

1/3 LC

IORDANSKIY, Ye. N.

"The Duration of Muscular Tension and Its Dependence on the Manner of Irritation." Sub 13 Nov 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum, No. 480, 9 May 55.

SHTERNSTEYN, Yakov Mironovich; IORDATII, N., red.; MOLCHANOVA, T.,
tekhn.red.

[Seaports of the Ukraine] Morskie vorota Ukrainy. Odessa.
Odesskoe obl.izd-vo, 1958. 243 p. (MIRA 13:1)
(Ukraine--Harbors)

SHODKHIN, Vladimir Sholomovich; IORDATII, N., red.; MOLCHANOVA, T.,
tekhn. red.

[Economics seminar in a plant] Ekonomicheskii seminar na zavode.
Odessa, Odesskoe oblastnoe izd-vo, 1958. 19 p. (MIRA 15:6)

1. Rukovoditel' seminar po izucheniyu konkretnoy ekonomiki na
Odesskom staleprovolochno-kanatnom zavode (for Shodkhin).
(Odessa—Iron and steel workers—Education and training)
(Industrial management—Study and teaching)

PANKRAT'YEV, Ivan Matveyevich; IORDATIIY, N., red.; MOLCHANOVA, R.,
tekhn. red.

[How we conduct economic conferences] Kak my provodim ekonomicheskie konferentsii. Odessa, Odesskoe oblastnoe izd-vo, 1958. 21 p.
(MIRA 15:6)

1. Sekretar' Kiliyskogo raykoma Kommunisticheskoy partii Ukrainy,
predsedatel' rayonnogo ekonomicheskogo soveta (for Pankrat'yev).
(Kiliya District--Farm management--Congresses)

IORDOVICH

COUNTRY : Yugoslavia
CULTIVATION : Cultivated Plants. Fruits. Berries. Nuts. Tea.

REF. JOUR.: Ref Zhur-Biologiya, No.5 , 1959, No.20 466

Author : Iordovich

TITLE : ---
Cultivating Plum Saplings Uninfected with
Virus Diseases.

ORIG. PUB.: Poljoprivreda, 1957, 5, No.1, 59-64

ABSTRACT : A method of selecting maternal plum trees
which are not infected by virus mosaic is
recommended to guarantee the Yugoslavian
nurseries with healthy cuttings.

CARD : 1/1

POP, Gr.; IORGA, I.

Synthesis of o-phthalodinitrile through the catalytic condensation
of phthalic anhydride with ammonia in vapor phase. Studii chim
Timisoara 7 no.3/4:317-319 J1-D '60. (KEAI 10:9/10)

(Phthalonitrile) (Catalysis) (Phthalic anhydride)
(Ammonia)

PILAT, L.; IORGA, M.; MOSCOVICI, B.

Clinical aspects of mercury poisoning. Med. int., Bucur. 10 no.4:
621-627 Apr 58.

1. Institutul de Igiena munci si boli profesionale R.P.R.

(MERCURY, poisoning

subacute, by mercury vapors, clin. aspects, case reports &
ther.)

(DIMERCAPROL, ther. use

mercury pois., case reports)

(EDATHAMIL, ther. use

mercury pois., case reports)

10RGA, N.

17
A micromethod for the determination of cobalt and copper with sodium *p*-aminosalicylate. Radu Rulica and Neculai Iorga. *Analele Univ. Al. I. Cuza Iasi, Sect. I. (N.S.)*, 2, 211-20 (1950). For Co: Into a 25-ml. flask, the following are needed in the given order: a few ml. of a soln. contg. 0.003-0.3 mg. Co; 5 ml. of 4*M* Na *p*-aminosalicylate (I); 10 ml. of 4*M* NaOH; and a few grains of Na₂O₂. After 10 min. add 0.75 ml. of 1*M* Na₂SO₄ and water to the mark. The brown color obtained is stable for 30 min. and can be read through a green filter. The calibration curve has an inflection point at 0.0021 mg./ml. Co. The Co can be detd. in the presence of Fe 1:40; Pb, Sn, V 1:1000; Mn 1:60; Cr 1:600; and Ni 1:70. Cu ions interfere. For Cu: Into a 25-ml. flask add the following in the given order: 0.008-0.8 mg. Cu; 5 ml. 1: 10 ml. NaOH; 0.13-0.20 g. Na₂O₂ and after 20 min. 1.25 ml. Na₂SO₄ and water to the mark. The brown color is stable for 30 min. and can be read through a green filter. Co and As ions interfere but Fe 1:40; Cu 1:60; and Pb, Sn 1:100 do not. Martin L. Lippert

PONI, Margareta; IORGA, N.; BOSTIAN, Marcel

Thermogravimetric and X-ray diffraction study of some
5-nitrobarbituric acid complexes. Studii chim Iasi 14 no.1:
19-32 '63.

1. Filiala Iasi a Academiei R.P.R., Institutul de chimie "P.Poni",
sectia de chimia combinatiilor coordinative.

IDRICEANU, T.; IORGA, N.; ERHAN, V.

Mineralogical research on some Sarmatian clays in the Moldavian Plateau. Pt. 2. Studii chim Iasi 14 no.1:103-111 '63.

1. Universitatea "Al. I. Cuza" Laboratorul de Mineralogie.

MODRYANU, Florin; IORGA, Nikolae, Yassy (Rumyniya)

Photometric determination of cobalt as cobaltinitrite [with
summary in English]. Zhur. anal. khim. 13 no.5:617-618
S-O '58. (MIRA 11:10)
(Cobalt) (Colorimetry)

10RG-A, N.

7
2-May
4E2

Polarographic investigations of the complexes formed by zinc in the solutions: seignette salt + NH_4OH + NH_4Cl + gelatin (A), and NH_4OH + NH_4Cl + gelatin (B). R. Ceruțescu, I. Popescu, A. Crăciun, M. Bostan, and N. Iorga. Acad. rep. populare Romîne, Filiala Iași, *Seminarul științ.*, Chim. 9, 1-19 (1958).—The De Ford-Hume equation (C.A. 46, 1908a) for the stepwise formation of complexes is discussed. It is shown that, when the stability consts. differed by a power of 10, linear segments appeared on the curve $E_{1/2}(\log C_2)$. The slopes of the linear segments allowed for the calcn. of the coordination index "p," in agreement with the conclusions of Adamovich and Novakovsky (C.A. 50, 721c). The reversible nature of Zn reduction, and the diffusion current on reducing Zn(II) in basic solns. of A and B, resp., were detd. The charge on the Zn ion being reduced at the dropping electrode was detd. The $E_{1/2}$ values were established for various concns. of the NH_4OH complexing agent. The max. coordination index of the Zn complexes with A and B was detd.: $p = 4$ for B, corresponding to the complex $[\text{Zn}(\text{NH}_3)_4]^{++}$, and $p = 6$ for A, corresponding to the complex $[\text{Zn}(\text{NH}_3)_6]^{++}$. The above indicates that the presence of the tartrate ion in ammoniacal solns. favors the formation of the higher complexes. The normal oxidn.-redn. potential of Zn(II) in a closed circuit at 20° was detd.: $E_{00}^\circ = -1003$ mv. The instability const. of the complex $[\text{Zn}(\text{NH}_3)_4]^{++}$ at 20°C was detd.: $K^* = 3.68 \times 10^{-14}$, in accord with the value given by Lefebvre; 3.63×10^{-14} at 25° ; also for the complex $[\text{Zn}(\text{NH}_3)_6]^{++}$ at 25° , $A^* = 5.5 \times 10^{-14}$. R. A. S.

FISEL, Simon; IORGA, Nicolae

Complex salts of the higher fatty acids (VIII): chromatographic study of the lauric acids of Co^{2+} , Ni^{2+} and Cu^{2+} . Studii chimie Iasi 10 no.2:185-194 '59. (EEAI 10:1)

1. Academia Republicii Populare Romine, Filiala Iasi; Institutul de Chimie "Petru Poni." Universitatea "Alex. I. Cuza" Iasi, Catedra de Chimie anorganica.

(Salts)	(Zinc)	(Cobalt)	(Nickel)	(Copper)
(Fatty acids)	(Chromatography)	(Lauric acid)		
(Cadmium)	(Mercury)	(Cations)		

PONI, Margareta P.; BOSTAN, Marcel; IORGA, Nicolae; GABE, Iulian

Salt complexes with 5-nitrobarbituric acid. Rev chimie Roum 9
no.10:575-584 0 '64.

1. "Petru Poni" Institute of Chemistry of the Romanian Academy, Iasi
Branch, 41 A Alcea Grigore Ghica Voda.

PONI, Margareta P.; BOSTAN, Marcel; IORGA, Nicolae; GABE, Iulian

Complex salts of the 5-nitrobarbituric acid. Pt.2. Studii
cerc chim 13 no.10:619-628 O '64.

1. "Petru Poni" Institute of Chemistry, Rumanian Academy,
Iasi Branch, 41 A Alea Grigore Ghica Voda.

BULGARIA/Farm Animals. Horses

Q-2

Abstr Jour : Ref Zhur - Biol., No 11, 1958, No 49972

Author : Popov, V., Peliyov, Kh., Iorgov I.

Inst : Ministry of Agriculture

Title : Substituting a Part of Concentrated Foods and Hay by Corn Silage in the Diet of Colts.

Orig Pub : Nauchn. tr. M-vo zemed. i gorito, Sr. zhivotnovodstvo i vet. dolo, 1957, 2, No 1, 1-14

Abstract : In the diet of 1½-2 year old colts of the draft brood, 1 kg of concentrate and 2 kg of hay were substituted by 10-12 kg of corn silage. Also, in the diet of weaned foals, 0.4-0.8 kg of oats and 1 kg of hay were substituted by 5-7 kg of silage. The resulting weight gains were higher than the weight gains in control animals.

Card : 1/1

IO RGOV. V.

5,011 kg. of milk per cow. p. 17.
(cooperativno Zemdelie Vol. 10, no. 8, Aug. 1955, Sofiya)

SO: Monthly List of East European Accessions, (HEAL). LC. Vol. 4, No. 11,
Nov. 1955, Uncl.

IORGU, G.

"Electromagnetic theory" by I.A. Stratton. Reviewed by G. Iorgu.
Electrotehnica 11 no.4:150 Ap '63.

IORGU, Nikula. Cand Tech Sci -- (diss) "Experimental studies in the field
of ^{the use} ~~application~~ of nonmetal reinforcement for concrete." Mos, 1959. 18 pp
including cover (Min of Higher and Secondary Specialized Education USSR.
Mos Order of Labor Red Banner Construction Engineering Inst im V. V. Kuybyshev),
200 copies (KL, 49-59, 140)

-41-

IORGULESCU, A.

Determining the radon atmospheric concentration through the measurement
of catabatic solids by filtration tests. Studii cerc fiz 11 no.1:

232-235 '60.

(ERAI 10:1)

(Radon) (Radioactive fallout) (Filters and filtration)

ONCESCU, M.; IORGULESCU, A.

Organism irradiation due to atmospheric fallout. Studii cerc
fiz 14 no.6:769-773 '63.

1. Institutul de fizica atomica, Bucuresti.

IORGULESCU, Florin, conf. ing. (Bucuresti); DIACON, Alexandru, conf.
~~(Bucuresti)~~

Considerations on the use of the Rumanian water power resources during the 1961-1980 period. Energetica Rum 10 no. 11:457-463 N '62.

1. Director tehnic al Institutului de studii si proiectarii energetice (for Iorgulescu).
2. Inginer specialist la Institutul de studii si proiectari energetice (for Diacon).

BUTESCU, E. dr.; IORGULESCU, M., dr.; CALOTA, St., dr.; TATARU, N., dr.;
CIOBANU, I., dr.; CUMPANAS, M., dr.; CANCEVIC, M., dr.

Clinical aspects of poisoning with insecticides and fungicides
and our therapeutic experiences. Microbiologia (Bucur) 9 no.5:
453-456 S-O '64

1. Lucrare efectuata in Spitalul nr.3, Craiova.

RUMANIA

616.981.551:618.39

BUTTESCU, E., Dr, IORGULESCU, M., Dr, TATARU, N., Dr, CIÓBANU, I., Dr, and CALOTA, Stefania, Dr. Work performed at the Hospital No 3 (Spitalul Nr 3), Craiova.

"Clinical and Epidemiological Considerations in 45 Cases of Uterine Tetanus."

Bucharest, Microbiologia, Parazitologia, Epidemiologia, Vol 11, No 3, May-Jun 66, pp 269-272.

Abstract [Authors' English summary modified]: After a review of the data in Rumanian and world literature regarding uterine tetanus, the authors discuss 45 cases of the infection seen at the Department for Infectious Diseases of the Craiova Hospital. Attention is called to the great diversity of forms which may occur and to the severity of the disease, which showed a death rate of 84.6 percent. While timely serum therapy and curettage gave the highest recovery rate of the treatments tried, the authors stress that the only effective prophylaxis consists of specific prophylactic measures coupled with a general rise of educational and sanitary standards.

Includes 10 references, of which 2 Rumanian, 2 English-language and 6 French-language. -- Manuscript submitted 1 October 1964.

1/1

MILKU, Sh.M. [Milcu, S.A.]; ANDZHELESKU, Ye. [Angelescu, E]; DAMIAN, A.
[DAMIAN, A.]; STOYENESKU, D. [Stoenescu, D.]; OPRAN, Kh. [Opran, H.]
OPROYU, A. [Oproiu, A.]; IORGULESKU, G. [Iorgulescu, G].

Virilizing malignant tumor of the adrenal gland. 14a Probl. endok.
i gorm 8 no. 2:98-103 Mr-Ap'62. (MIRA 16:7)
(ADRENAL GLAND—CANCER) (VIRILISM)

GROSZ, I., ing.; IORGULESCU, Gr., ing.

Crack defectoscopy by fluorescence. Energetica Rum 9 no.9:
381-384 S '61.

1. Intreprinderea pentru rationalizari si modernizari energetice
(for Grosz). 2. I.E.C. Bucuresti (for Iorgulescu).

RUMANIA

BUTTESCU, E., Dr, IORGULESCU, M., Dr, and TATARU, N., Dr. Work performed at Hospital No 3 (Spitalul Nr 3), Craiova.

"Staphylococcal Scarlet Fever."

Bucharest, Microbiologia, Parazitologia, Epidemiologia, Vol 8, No 5, Sep-Oct 63, pp 433-436.

Abstract [Authors' English summary modified]: A report on four cases of the disease treated at the Craiova Hospital for Contagious Diseases. Clinical aspects are described, as are the positive laboratory tests that confirmed the diagnoses. It is pointed out that staphylococcal infections are on the increase. Includes 2 English-language and 3 Rumanian references.

BUTTESCU, E., dr.; IORGULESCU, M., dr.; TATARU, N., dr.

Staphylococcal scarlatina. Microbiologia (Bucur) 8 no.5:433/36
S-0'63.

1. Lucrare efectuata in Spitalul nr.3, Craiova.

IORGULESCU, P.

Sterility in animals. p. 71. NATURA. Bucuresti. Vol. 7, no. 3,
May/June 1955.

SOURCE: East European Accessions List (EEAL) Library of Congress
Vol. 5, No. 7, July 1956.

IORGULESCU, P., dr. (Bucuresti)

Eggs of Artemia salina, a new biological reagent. Natura
Biologie 16 no.3:93-94 My-Je '64.

A third type of twins? Ibid.:94

BALLY, D.; BENES, L.; ILIESCU, N.; IORGULESCU, St.; OLTEANU, I.

Characteristics of a universal X-ray tube. Studii cerc fiz 12
no.2:461-467 '61.

1. Institutul de fizica atomica Bucuresti.

(X-ray tubes)

BALLY, D.; BENES, L.; ILIESCU, N.; IORGULESCU, St.

The absorption spectrum K of the elements such as zinc, arsenic, selenium zirconium, and molybdenum, irradiated with neutrons.
Studii cerc fiz 13 no.3:443-448 '62.

1. Institutul de fizica atomica, Bucuresti.

BENES, L.; ILIESCU, N.; IORGHIESCU, St.; OLTEANU, I.

X-ray spectrometer with a 2m arm. Studii cerc fiz 14 no.1:73-78 '63.

1. Institutul de fizica atomica Bucuresti.

IORGULESCU, St.

Problems and prospects of X-ray microscopy. Studii cerc
fiz 14 no.5:647-670 '63.

1. Institutul de fizica atomica, Bucuresti.

IORGULESCU, Th., and others

Geologic and micro-paleontologic considerations on some salt deposits of Rumania. P 127

REVISTA MINELOR. (Ministerul Minelor, Ministerul Industriei Petrolului si Chimiei, Directia Exploatarilor Miniere si Asociatia Stinitifica a Inginerilor si Tehnicienilor din Rominia) Bucuresti, Rumania. Vol. 10, no. 4, Apr. 1959.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, no. 9, Sept. 1959.

Uncl.

IORISH, A.L.

25194 Iorish, A.L. Issledovanie Zagryazneniya Atmosfernogo Vodukha Odnogo Iz
Raynnov Leningrada, Trudy Leningr. San.-Gigien, Med. In-ta. T.I., 1949
s. 49-62

SO: Letapis' No. 33, 1949

Iorish, A. L.

AID P - 3645

Subject : USSR/Medicine

Card 1/1 Pub. 37 - 9/18

Author : Iorish, A. L., Kand. Med. Sci.

Title : ~~Iorish, A. L.~~ Some data on eye contamination in the streets

Periodical : Gig. i. san., 10, 40, 0 1955

Abstract : Deals with air conditions in the vicinity of electric power plants or railroads, and recommends the installation in the streets of cinder-catching devices to prevent cases of eye contamination by coal, cinder or dust particles. Table.

Institution : Leningrad Medical Institute of Sanitation and Hygiene

Submitted : Ap 19, 1955

IOYRYSH, A.

Enterprise funds for ameliorating workers' living conditions and improving
production. Sev. profsoiuzy 4 no.1:57-58 Ja '56. (MIRA 9:4)
(Industrial management)

IORISH, A.L.

Effectiveness of measures for air purification in the Leningrad area. Trudy ISGMI 26:86-90 '56. (MLRA 10:6)

1. Kafedra kommunal'noy gigiyeny Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta. Zav. kafedroy - prof. P.K. Aggeyev.

(AIR POLLUTION, prevention and control,
in Russia (Rus))

IORISH, A.L.

Ocular trauma suffered on the streets as an index of air pollution.
Trudy ISGMI 26:91-96 '56. (MIRA 10:6)

1. Kafedra kommunal'noy gigiyeny Leningradskogo sanitarno-gigiyeni-
cheskogo meditsinskogo instituta. Zav. kafedroy - prof. P.K. Aggeyev.
(AIR POLLUTION,
causing eye inj. (Rus))
(EYE, wounds and injuries,
caused by air pollution (Rus))

IORISH, Aleksandr Yevgen'yevich; KATSMAN, Yakov Abramovich; PTITSYN,
Sergey Vladimirovich; UBOLENSKIY, S.A., red.; ZHITNIKOVA,
O.S., tekhn. red.

[Principles of the manufacturing technology of electric
vacuum devices] Osnovy tekhnologii proizvodstva elektrova-
kuumnykh priborov. Moskva, Gos. energ. izd-vo, 1961. 515 p.
(MIRA 15:2)

(Electron tubes)

S/109/63/008/002/010/028
D413/D308

AUTHORS: Iorish, A.Ye., Krasin'kova, M.V., Moyzhes, B.Ya.,
and Sorokin, O.V.

TITLE: The thermal emf, electric conductance and resistance
variation in a magnetic field of barium-strontium
oxide

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 2, 1963,
269-278

TEXT: Although a number of papers have dealt with measure-
ments of thermal emf, $\Delta\rho/\rho$ in a magnetic field, and electrical con-
ductance of cathode oxide coatings, these data have been considered
in isolation. Here they are all examined together in the light of
the accepted theory that conduction in oxide coatings occurs through
the pores, which are filled with electron gas by thermionic emission
from their walls. First a theoretical treatment is given for the val-
ues of thermal emf, conductance and $\Delta\rho/\rho$ for the electron gas in
the pores, and then experimental results for barium-strontium oxide

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S/109/63/008/002/010/028
D413/D308

The thermal emf, ...

are presented and discussed. The linear relation of $\Delta p/p$ to H in weak magnetic fields is explained: the work function relative to the bottom of the conduction zone is evaluated: the dimensions of the pores for maximum conductance are calculated with allowance for the space-charge in the pores. There are 8 figures.

SUBMITTED: April 26, 1962

Card 2/2

ACCESSION NR: AP4017600

S/0109/64/009/002/0300/0307

AUTHOR: Dubova, T. A.; Iorish, A. Ye.; Krasin'kova, M. V.;
Moyzhes, B. Ya.; Petrov, I. N.; Sorokin, O. V.; Chudnovskiy, F. A.

TITLE: Electrical conductivity and thermo-emf of a barium-strontium oxide in
a magnetic field

SOURCE: Radiotekhnika i elektronika, v. 9, no. 2, 1964, 300-307

TOPIC TAGS: electrical conductivity, thermo emf, oxide coated cathode,
barium strontium oxide, barium strontium oxide thermo emf, barium strontium
oxide conductivity

ABSTRACT: Measurements were taken of factory specimens of Ba-Sr oxide,
100-200-microns thick, placed between two cylindrical nickel bases (see
Enclosure 1) and subjected to a transverse magnetic field. One of the tubes was
equipped with a ring anode and served to measure the thermo-emission from the

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ACCESSION NR: AP4017600

side surface of the oxide. The effect of temperature and the magnetic field on the resistivity and thermo-emf of the Ba-Sr oxide was investigated. Estimated from experimental results, the free-path length of an electron in the cathode pores is 4-30 microns and the electron mobility is from 3.5×10^4 to 2×10^5 cm²/v sec for the various specimens. The thermodynamic work function, electron concentration, and conductivity are also estimated. It is inferred that the pores in the oxide cathode must be open and intercommunicating and, therefore, that under total thermionic-current conditions, the electrons must be emitted by the entire near-surface layer of the oxide; this fact may, in part, explain the abnormally high Schottky effect in oxide cathodes. Orig. art. has: 7 figures, 13 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 30Dec62

DATE ACQ: 18Mar64

ENCL: 01

SUB CODE: GE

NO REF SOV: 001

OTHER: 003

Card 2/3

ACCESSION NR: AP4043679

S/0109/64/009/008/1447/1457

AUTHOR: Jorish, A. Ye.; Moyzhes, B. Ya.; Sorokin, O. V.;
Chudnovskiy, F. A.

TITLE: Temperature distribution in a cathode oxide coating

SOURCE: Radiotekhnika i elektronika, v. 9, no. 8, 1964, 1447-1457

TOPIC TAGS: oxide cathode, electron tube, electron tube cathode,
(BaSrCa)CO₃ cathode, (BaSr)CO₃ cathode

ABSTRACT: The theoretical and experimental investigation of the temperature distribution in an oxide-coated cathode is reported. The theoretical part differs from the well-known work of H. C. Hamaker (Philips Res. Repts., 1947, 2, 55-67, 103-111, 112-125) in that the temperature drop in the oxide is not assumed small, and an allowance is made for the Joule heat in the oxide, for the refractive index of the oxide, and for the radiation reflected by the anode. The experimental part includes measuring the thermal conductivity (10^{-5} — 3×10^{-6} w/cm-degree) of oxide-coating grains at temperatures ranging from room temperature

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ACCESSION NR: AP4043679

down to liquid-nitrogen temperature. It is estimated that the temperature of the oxide may be higher than that of the cathode base by hundreds of degrees when heavy emission currents are involved; a still higher difference is possible under pulsed operating conditions of the tube. The anode reflection has an essential effect on the temperature distribution. Hot spots on the cathode due to low thermal conductivity at heavy emission or due to an insufficient rate of heat removal from an underheated cathode may result in sparking; a formula giving a criterion of the cathode thermal instability is offered. The heat radiation capacity of a Ni-base oxide cathode was measured; the radiation dissipation factor, which corresponds to a photon free-path length of 30-50 microns at 800-900C, is estimated. Orig. art. has: 5 figures, 31 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 15Jun63

SUB CODE: EC

ENCL: 00

OTHER: 011

NO REF SOV: 005

Card 2/2

IORISH, A.Ye.; MAYZHES, B.Ya.; NILOV, O.M.; CHUDNOVSKIY, F.A.

Pulsed emission and thermal conditions of an oxide cathode.
Radiotekh. i elektron. 10 no.6:1088-1093 Je '65.

(MIRA 18:6)

L 00862-66 EWT(m)/EWG(m)/T DS

ACCESSION NR: AP5015811

UR/0109/65/010/006/1098/1093
621.385.735

AUTHOR: Iorish, A. Ye; Moyzhes, B. Ya.; Nilov, O. M.; Chudnovskiy, F. A. 14
B

TITLE: Pulse emission and thermal conditions of the oxide-coated cathode 7

SOURCE: Radiotekhnika i elektronika, v. 10, no. 6, 1965, 1089-1093

TOPIC TAGS: oxide coated cathode

ABSTRACT: Pulse current-voltage characteristics of the triode section of a GF1P oxide-cathode tube were measured; 5- μ sec pulses singly and at repetition rates of 50, 100, 300, and 100 cps were applied. It was found that, with single pulses, the characteristics are close to the normal Schottky law; thus, the hypotheses explaining the high pulse emission by curving the zones at the surface, by secondary emission, and by surface inhomogeneity have been disproved. The emission monotonously increased with the repetition rate. This can be explained by the heating up of the oxide surface if the very little thermal conduction of the oxide coating is taken into account. It was also found that the cathode heat exchange through radiation is comparable to that through thermal conduction. Orig. art. has: 3 figures, 6 formulas, and 2 tables.

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L 00862-66

ACCESSION NR: AP5015811

ASSOCIATION: none

SUBMITTED: 29Dec63

ENCL: 00

SUB CODE: EC

NO REF SOV: 006

OTHER: 004

Card 2/2

TORISH, L. S.

"Some Facts About the Condition of the Blood Circulation in Hypertonic Disease." Sub 26 Mar 51, Second Moscow State Medical Inst imeni I. V. Stalin.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

IORISH, L. S.

1. FOGEL'SON, L. I.; IORISH, L. S.

2. USSR (600)

4. Heart--Infarction

7. Regional diagnosis of myocardial infarcts from electrocardiographic data; first communication. Vop. pat. serd. sos. sist. 2 no. 1 1953

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

IORISH, N.P.

SHTANCHAYEV, S.Ts., pomoshchnik epidemiologa (Kokchetav)

"Therapeutic qualities of honey and bee venom." N.P. Iorish. Reviewed by S.Ts. Shtanchayev. Fel'd. i akush. no. 5:62-63 by 55.
(IORISH, N.P.) (MIRA 8:7)
(HONEY)
(VENOM)

IOERISH, Naum Petrovich

[Useful beverage] Polesnyi napitok. Tbilisi, Sabchota Sakartvelo,
1958. 20 p. (MIRA 14:11)

(BOTANY, MEDICAL)